DOCUMENT RESUME

ED 435 005 CE 079 191

TITLE	Literacy and Technology. Ensuring Universal Rights to Literacy and Basic Education. A Series of 29 Booklets Documenting Workshops Held at the Fifth International Conference on Adult Education (Hamburg, Germany, July 14-18, 1997).
INSTITUTION	United Nations Educational, Scientific, and Cultural Organization, Hamburg (Germany). Inst. for Education.
ISBN	ISBN-92-82010-89-9
PUB DATE	1999-00-00
NOTE	12p.; For other booklets in this series, see CE 079 178-206.
AVAILABLE FROM	For full text: <http://www.education.unesco.org/uie>.
PUB TYPE	Collected Works - Proceedings (021)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Access to Education; Adult Education; *Adult Literacy; Computer Uses in Education; *Delivery Systems; Educational Improvement; *Educational Technology; *Educational Trends; *Equal Education; Foreign Countries; Informal Education; Internet; *Literacy Education; Nonformal Education; Position Papers; Trend Analysis

ABSTRACT

Although technology is not the answer to all educational problems, it is proving to be a useful tool in improving the quality and efficiency of literacy provision in the formal, nonformal, and informal education sectors. Adopting technology demands a selection process for determining which technology is appropriate, by and for whom it will be used, and for what kind of communication and content. It is important to view technology in the wider political, social, and economic context rather than merely in terms of hardware and software packages. Principles in planning the integration of technology into literacy programs include the following: depart from existing strategies and structures; focus on affordability of initial investments in setting up systems; include a training program on using technology; and be flexible about time schedules. Television, radio, computers, and the Internet can all be important tools for facilitating lifelong and lifewide learning. Technology often raises the fear of inequality. Analysis of experiences with educational technology appears to indicate that, although it may initially widen the gap between those with and without access, it holds great potential for making adult and literacy education more affordable and accessible to broader audiences. (MN)

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ED 435 005

A series of 29 booklets documenting workshops held at the Fifth International Conference on Adult Education

3f Literacy and technology

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Readers are reminded that the points of view, selection of facts, and the opinions expressed in the booklets are those that were raised by panellists, speakers and participants during the workshop sessions and therefore do not necessarily coincide with official positions of the UNESCO or of the UNESCO Institute for Education Hamburg. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the UNESCO Secretariat concerning the legal status of any country or territory, or its authorities, or concerning the delimitations of the frontiers of any country or territory.

Theme 3: Ensuring universal rights to literacy and basic education

Booklets under this theme:

3a Literacy in the world and its major regions
3b Literacy and learning strategies
3c Literacy, education and social development
3d Literacy research, evaluation and statistics
3e Literacy in multilingual/intercultural settings
3f Literacy and technology
3g Literacy for tomorrow

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ISBN 92 820 10 89-9
Design by Matthew Partridge, Hamburg
Printed by Druckerei Seemann, Hamburg
1999

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Foreword

In July 1997 the Fifth International Conference on Adult Education was held in Hamburg, organised by UNESCO and in particular the UNESCO Institute for Education, the agency's specialist centre on adult learning policy and research. Approximately 1500 delegates attended from all regions of the world, with representatives of 140 member states and some 400 NGOs. In addition to the work of the commissions and plenary which debated the official documents of the Conference The Hamburg Declaration and The Agenda for the Future, there were 33 workshops organised around the themes and sub-themes of the Conference.

As part of its CONFINTEA follow-up strategy, the UNESCO Institute for Education has produced this series of 29 booklets based on the presentations and discussions held during the Conference. The recordings of all the workshops were transcribed and synthesized over one year, edited, and then formatted and designed. A tremendous amount of work has gone into this process. Linda King, coordinator of the monitoring and information strategy for CONFINTEA, was responsible for overseeing the whole process. Madhu Singh, senior research specialist at UIE, undertook the mammoth task of writing almost all the booklets based on an analysis of the sessions. She was helped in the later stages by Gonzalo Retamal, Uta Papen and Linda King. Christopher McIntosh was technical editor, Matthew Partridge designed the layout and Janna Lowrey was both transcriber and translator.

The booklets are intended to draw out the central issues and concerns of each of the CONFINTEA workshops. They are the memory of an event that marked an important watershed in the field of adult learning. We hope that they will be of use both to those who were able to attend CONFINTEA V and those who were not. We look forward to your comments, feedback and continuing collaboration with the UNESCO Institute for Education.

Paul Bélanger,
Director, UNESCO Institute for Education, Hamburg
and Secretary General of CONFINTEA

Literacy and technology

Introduction

Many changes are now taking place throughout the world and they are of enormous concern and relevance to adult learning. Adults are under pressure to develop and utilise new knowledge frameworks, skills and value systems. It is time for literacy providers to have the courage to experiment, to try out new alternatives and renew the assault on illiteracy. Innovations in technology can improve literacy programmes and accelerate the spread of literacy. This forges an inevitable link between the use of technology and literacy.

This booklet presents results of a panel discussion on "Literacy and Technology", held during the CONFINTEA V (Hamburg, 14–18 July 1997)[1]. The term technology here embraces educational technologies such as the Internet, TV, interactive video and radio. The aim of the panel discussion was to explore the relationship between literacy and technology, and the potential role of technology as a tool in literacy provision. The important question was not whether, but how technology can adapt to changing demands.

The panel was chaired by Jan Visser, UNESCO LWF, Learning Without Frontiers (LWF), UNESCO, France[2]. Mohamed Maamouri, International Literacy Institute (ILI), Tunisia, served as discussant. The remaining panel members were: Alan Tuckett, the National Institute of Adult Continuing Education, England and Wales, (NIACE), UK, Minda Sutaria (INNOTECH, Philippines), Shigeru Aoyagi, Asia Pacific Cultural Centre (ACCU) UNESCO, Japan, Sibiri Tapsoba (IDRC, Senegal), and Christopher Hopey, National Centre on Adult Literacy, USA.

An important conclusion was that technological innovation, the costs of technology and the introduction of technology into literacy teaching are not the main problems. The real concern is how to ensure that literacy providers have the capacity and political will to apply the technology appropriately.

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[1] See the homepage of CONFINTEA V: http://www.education.unesco.org/confintea

[2] See the homepage of Learning Without Frontiers (LWF): http://www.education.unesco.org/lwf

Technology, a tool for improving literacy programmes

Today's world is moving towards a more open and global society. In order to deal with its changing demands, people need to learn how to cope with change and at the same time to interact constructively with it and retain control of the processes involved. Alternative strategies need to be identified to ensure greater learning effectiveness and meet the literacy needs of masses of people in a timely and economical manner.

Technology is a useful tool to improve the quality and the efficiency of literacy provision. It helps create learning environments ideally suited to the needs and interests of previously unreached populations and offers new learning opportunities. It stimulates learners to be more creative and innovative. In fact, it revolutionises the way we handle information - with the focus moving from teaching to self-directed learning, from learning as a one-time event to a lifelong learning process.

Technology is introducing radical changes, with non-formal and informal education assuming an important place in addition to formal education. Non-formal education is already improving because of the advantages of technology. It has proved to be effective in reaching out to vast unreached school-age populations. In fact, the distinction between those categories is becoming increasingly irrelevant.

Technology is not an end in itself nor an answer to all educational problems. It is a tool to improve literacy programmes, raise awareness about the literacy problems and reach a vast number of unreached illiterates. Technology deals not only with textual literacy, but also with visual literacy.

Adopting technology demands also a process of selection and decision-making regarding which technology is appropriate, by and for whom it is to be used and for what kind of communication and content. This process is itself useful because it helps to crystallise ideas, create visions, and motivate greater numbers to pursue literacy through technology. It encourages participation.

Technology does not operate in a vacuum

It is important to view technology in the wider political, social and economic context, rather than merely defining it in terms of hardware and software packages. By considering all of the interrelated components, technology can create learning environments suited to the needs of the learners and be made highly relevant to literacy programmes.

Technology offers the possibility of quality education for all in less time than required by traditional strategies, provided that its deployment is well thought out, planned and subject to continuing evaluation and renewal.

The following are some of the principles in planning the integration of technology into literacy programmes:

- Depart from existing strategies and structures. This might require using a combination of old and new technologies.
- Focus on affordability of initial investment in setting up the system.
- Include a training programme in the use of technology. This often requires the largest investment, yet it is most crucial to successful implementation of technology.
- Include issues such as:
  - commitment to a long-term plan for maintenance and support;
  - commitment to periodically upgrading the system;
- Be flexible about time schedules. There should be no definite deadline for introducing technology. It is more important to seek the best solution.

In this context, it is important to think about the possible marginalisation of people, and the creation of new zones of power depending on the advantages being created for some through technology. For technology to play its full role it should be accessible to those who have been deprived of it in the past. If all societies in all their diversity are to be motivated and persuaded that reading and communication matters really, then their voices must all be heard. Technology should be for people's empowerment.

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Types of technology

Different types of technology can be used to promote literacy, either independently or in combination. The main selection criteria are the appropriateness and affordability of the technology.

TV and radio are important sources for lifelong and lifewide learning. Huge numbers of non-literate or marginally literate individuals, for whom formal education has little practical applicability, with little or no reading material in their homes, have regular access to radio and often TV as well. The educational uses of television and radio include:

- generating awareness of the literacy problem
- developing consumer demand for learning
- retaining learners in a programme
- reaching a large number of individuals

National broadcasters are also involved in educational broadcasting as well as specific educational initiatives.[3] Positive feedback on high quality educational broadcasting has shown that people for whom the education system has failed do not trust educators as much as they trust broadcasters. Educational broadcasting often has a motivational function, rather than an instructional function.

Experience with the use of computers and other technologies, such as interactive video, suggest that they can contribute to the development of thinking skills and make instruction more individual. They also provide ways to collect and evaluate information efficiently as well as help learners to communicate what they think and feel.

The Internet is another tool that can be used in improving literacy programmes. Through it adults can be provided with higher quality materials and access to information in homes, workplaces and public libraries. It also provides adults with greater choices which is the key to motivation, retention and enriched learning experience. Using the Internet in literacy promotion means learning faster what is happening around the world and having access to almost unlimited resources for the sharing of professional ideas and problem-solving[4].

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[3] See the homepage of the National Institute of Adult Continuing Education England and Wales (NIACE): http://www.niace.org.uk

[4] See the homepage of the International Literacy Institute (ILI): http://www.literacyonline.org

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Technologies based on Internet do not need to be expensive. Many people in developing countries, as in industrialised countries, already have the technology, but they lack extra phone lines or faster modems to allow effective and extended networks. In fact, the problem of introducing technology in literacy programmes lies not so much in its cost or the rate of innovation, but rather in the human factors of reinforcing human competence and political will.

Does technology increase inequity?

Technology often raises the fear of inequity. There are also fears that technology may be a new form of colonisation, resulting in reducing diversity. The use of technology can widen the gap between those who have access and those who do not. The dilemma is that introducing new technologies requires an initial level of technological competence. The crucial question is: who will be the user? Will it be an experienced user, or a learner who was deprived of technology in the past? Or should technology-based literacy programmes initially target professional educators and policy makers? Government and non-governmental agencies should be aware of this problem and must address the issues of who will be the users and who will be controlling, constructing and policing the technology.

To address the issue of inequity, there is a need for:

- trust, political will and devotion to the people, if the gap is not to widen;
- respect for diversity of language and culture;
- promotion of technology for two-way communication. Information should flow from top to bottom and visa versa, as well as horizontally;
- reliable information on beneficiaries in order to identify clearly how to disseminate information and to whom, while developing different strategies for different contexts. This information may include literacy materials, statistics, relevant organisations, curricula, literacy publications, and a literacy glossary.[5]

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[5] See the Asia-Pacific Literacy Datebase of the Asia-Pacific Cultural Centre for UNESCO (ACCU): http://www.accu.or.jp/litdbase/index.shtml

In the short term, it may be true that technology can widen the gap between those with access and those without it, but in the long term, it is worth remembering that radio and television were once instruments of the rich. It may perhaps be wise to take a time horizon into account when talking about these fears.

Summary of existing experiences

Below are some of the conclusions from the panel discussion on "Literacy and Technology" during CONFINTEA V:

- Technology has transformed many literacy programmes, by providing access to information especially in areas of public policy, and by advocating rights of adults and learners. It has made a big difference to the level of funding and resources that flow into literacy.

- Technology encourages adult learners to be much more creative and imaginative. It offers new learning opportunities for adults, such as instruction online, video, audio and other tools.

- Technology provides adults with greater choice which is the key to motivation, retention and enriching learning experience. New technologies also provide new places to learn. Through the Internet and other new technologies adults can have access to higher quality material and more learning opportunities from homes, workplaces and public libraries. This in turn extends resources from local literacy programmes into those places.

- Technology does not need to be expensive. The crucial point is to make the optimal use of time, energy and staff.

- Through technology such as the Internet, teachers themselves become adult learners. They learn how to use the computer, how to integrate it into the curriculum, how to organise the resources, how to be creative and imaginative.

- Teacher training in technology use is absolutely essential for the successful integration of technology into literacy programmes.

- Interlinking technology and literacy makes sense when it deals with technology not only as a vehicle, but also as an important content area for the promotion of adult education.

- The real issue behind literacy and technology is about adult educators taking a lead in the field of education and providing new ways of learning, rather than waiting for others to tell them what to do and how to do it.

Conclusion

New technologies are not necessarily the whole answer to the problem of delivering literacy programmes. There is room for both old and new technologies. Technology must be appropriate and should help people to learn as quickly, as economically and as effectively as possible. Technology properly used, i.e. in a way appropriate to the communities that learn through them, can facilitate the learning of new higher level skills needed for a world which is becoming increasingly global and which is therefore more and more in need of local empowerment. Technology should be well thought out and planned for that context. There should be a continuing evaluation and revision process to promote the best mix of technologies. It is no longer cost-effective to ignore technology. In particularly, adult education, the least well funded area of education, just cannot afford not to use the technological opportunities that exist.

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The CONFINTEA logo, designed by Michael Smitheram of Australia, represents the lines on the palm of a hand. These lines are universal and yet different for each subject. They celebrate cultural diversity and the joy of learning.

Theme 3

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